

Comanagement of Natural Resources

LOCAL LEARNING FOR POVERTY REDUCTION

5

Young researchers battle poverty and bureaucracy in rural China

Participatory projects empower poor villagers to seek their own solutions

A team of enthusiastic young researchers set out to help villagers in remote Guizhou province to improve their lives through participatory management of their resources. Success at the local level, however, did not necessarily bring immediate support from more senior levels of government where bureaucrats felt threatened by the villagers' newfound confidence.

When villagers in one of the poorest regions of China wanted to improve their lot by building a biogas plant, they ran into an unexpected problem: provincial regulations required that each village household raise three pigs to ensure a steady supply of manure to produce the gas. Three pigs was more than most of the villagers could afford, but county officials insisted the rules must be followed. Score one for the bureaucracy.

That village is just one of many small communities in Guizhou province in southwestern China. And the "three pig rule" is just one example of the problems the local people faced when attempting to deal with China's enormous bureaucracy. This is a mountainous region inhabited mostly by ethnic minority peoples. For the most part, the people are poor, eking out a living on small plots of land to produce staples such as rain-fed rice and corn.

During the central government's "Great Leap Forward" in the 1950s, entire hillsides were clear-cut by misguided industrial development plans, turning forests and pastures into unproductive wastelands. It has proven extremely difficult to re-establish forests, to improve crop yields, or to diversify production systems on the thin soils that cover porous limestone rock. Government programs and services are typically developed and delivered in a top-down fashion

that ignores local knowledge and customary practices. Attempts to increase agricultural production focused on plant breeding and growth. They failed because they did not meet the needs of farmers.



Ou Guowu (Guizhou project team)

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Yuan Juanwen (Guizhou project team)

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In more recent times, the rural economy has been largely transformed as land use rights were transferred to farmers under the “household responsibility” system. Markets have been opened up, and farmers have a choice in what they can produce and how. However, land, forests, and water resources in rural areas remain owned by the government. Local communities have constitutional rights to manage these common resources, but little attention has been paid to institutional arrangements that would support collective management.

Some researchers at the Guizhou Academy of Agricultural Sciences (GAAS), however, were determined to try new, integrated research strategies for community-based natural resource management (CBNRM). With support from IDRC, they selected two villages in remote Kaizuo township — an impoverished area where local government had given up on prospects for improving livelihoods. Water resources for agriculture were scarce because of the limestone topography and the old, poorly maintained, government-built irrigation systems, many of which had fallen into disuse. Only two of seven pumping stations for irrigation were functioning properly. Nobody took responsibility for the systems, and no rules were defined for their use.

Novel approach

The new GAAS team was made up of enthusiastic young researchers who were willing to learn, to try new methods, to spend long periods in difficult fieldwork with villagers, and who had a broad range of disciplinary strengths. Their novel participatory approach built on local knowledge by strengthening the capacities of farmers and organizing communities to support new resource management institutions.

At the outset, the researchers noticed that, although the villagers had community rules to deal with property issues such as theft or intentional crop damage, they had given little thought to rules for the collective use of communal resources such as water, pastures, forests, and roads. So, they encouraged open discussion of problems and

management strategies to cope with them, and they organized groups of resource users to work with village leaders to implement resource management rules — and enforce them. Because these rules were drawn up by the villagers themselves and accepted at village meetings, they took on the force of customary law.

The researchers used participatory diagnostic tools to assess resource management problems, and worked with local farmers to test a variety of technology options. This led to the introduction of new products, such as mushrooms and specialty fruits, that could be cultivated and sold by the village women in nearby markets. But, for the women to get involved in marketing, they needed help to strengthen their literacy and numeracy skills. Most had little experience outside their own villages, had seldom visited market towns, and had little trading experience. Working together to organize the marketing of their produce not only increased the women’s self-confidence, it also strengthened social organization and practical livelihood skills and greatly increased their incomes and independence.

Another important step was the move to collective investment in, and management of, local infrastructure. This supported improvements such as water supply, irrigation, and road construction that would normally be undertaken by local government. For example, in one village a 200-year-old drinking water problem was solved by the construction of a village-managed drinking water system.

Government technicians had given up on this problem, declaring that the water resources were insufficient. But the old-timers in the village knew better. With the help of the research team, the villagers built their own water supply system, contributing their own labour and materials for construction. More significant, they also organized a scheme to recover costs through metering household use. Revenues were applied to system maintenance and all financial records were public to show transparency and build trust.

Project expanded

Within a couple of years, these improvements paid off for the villagers. Incomes increased and there was visible improvement in resource quality. It didn’t take long for the word to spread. The project attracted the attention of people in neighbouring villages, who requested similar support. Chinese and international NGOs became interested in working in the area because of the strength of community organizations. Soon the project expanded to cover six villages in the area.

One of the unexpected results following the introduction of the CBNRM approach was that the expectations of villagers about local governance changed. They became more articulate about their needs and better able to take initiative and to use evidence to support their arguments for more responsive local government. “Now that we have

begun to organize to manage our resources, we are seeing more and more benefits,” was typical of the comments overheard by the researchers.

The research team frequently invited government officials from various agencies to attend meetings and kept them informed of their local innovations. Government staff were supportive, but generally too busy to get much involved in these activities, which they saw as being outside their specific responsibilities. “I am interested in being involved, but there are so many important tasks I must finish, otherwise I will have problems in passing annual evaluation,” was the response of one harried bureaucrat.

In 2001, after several years of action research in six villages, the GAAS researchers had gained substantial knowledge of how to reduce poverty through CBNRM. They determined to devote more attention to disseminating this knowledge through the large and complex system of government administration. Their work in Kaizuo had convinced them that there were three key elements to poverty reduction:

- The formation of local resource user groups to devise and implement regulations for managing common pool resources important to village livelihoods;
- Strong participation of villagers, including women, in management decision-making at all levels; and
- Building on the knowledge and skills of the villagers themselves to improve natural resource management.

Increasing interest

The dissemination efforts encountered some success at the township level, where officials were increasingly interested in the new methods. Said one township leader: “After we adopted the CBNRM approach, many management activities were done by the villagers. The government has been released from some tasks. The villagers now take care of themselves.” The research team encouraged the villagers to monitor the implementation of projects themselves, so as to make early modifications if required.

However, the vast Chinese bureaucracy has its own internal logic and inertia, and the decision-making process is top-down. Projects tend to be evaluated only after they are completed, and not during their operational life. Local conditions are generally ignored, and failures are common. The researchers, of course, were trained in science, field-work, and analysis, not in diplomacy, public administration, or political negotiation. So they found it very challenging to convince government officials higher up the bureaucratic ladder.

Despite the success record and experience of the research team, despite consistency with national policy and the announced commitments of senior government officials, county officials strongly preferred not to implement the new practices. Their conventional administration — and fear for their own careers — mitigated against meaningful

China’s multilayered local government structure

The **village** is the smallest unit of local organization in China, but it is not a unit of local government. The **commune** (sometimes called an administrative village) is the smallest unit defined for administrative purposes, and it may include several “natural” villages. Above the commune is the **township**, which is the lowest level of formal public administration and is closest to the reality of the villages. The next level is the **county**, which has been a key unit of public administration for centuries, and is in many respects the most powerful unit of local government. A county may include both rural and urban communities and have a population of 1 to 2 million. Above the county are two more senior levels of local government: the **prefecture** and then the **province**.



Farmer-to-farmer and village-to-village learning proved very effective in fostering local initiative and innovation.

local participation. Commented one official: “If we give all the decision-making power to the villagers, what are we going to do? We will lose our jobs!”

On the other hand, horizontal transfer of participatory local management lessons worked well. Farmer-to-farmer and village-to-village learning proved very effective in fostering local initiative and innovation. The researchers systematically tested several ways of spreading their participatory planning and management techniques using small rural development investment projects in parts of Kaizuo township where they had not worked before.

For example, following a workshop for village leaders organized by the researchers, the head of Huabian village (population 250) submitted a proposal to the township to build a road that would improve the villagers’ access to markets. The villagers themselves raised 7 000 yuan for materials for the project. After several meetings with team members township officials agreed to match this amount. As soon as the planting season was over, the villagers built the 1.26 km stretch of road in less than two months. Other

projects included building small-scale water supply or irrigation systems and reclaiming degraded lands for terraced orchards.

As township officials gained experience with approaches that gave more authority and responsibility to local people, they became more enthusiastic and their attitudes started to change. One township agricultural extension officer told the researchers: "I used to do only what my superiors asked me to do. Now I hold villagers' meetings to discuss with them and try out some new things."

Confident women

The women of the villages also showed newfound confidence, and began to initiate activities to improve their lives. A clear indication of changing attitudes came when village committee elections were held in four villages. Township officials decreed that all the village committees should include at least one woman — something that had never happened before.

By 2004, despite the reluctance at the county level, 29 of 37 communes in Kaizuo township had experience with collaborative local management ventures and 30 formal management agreements had been approved. Over 600 ha of forests had been successfully planted and were growing under local management. Rice and corn production had increased sharply with the introduction of various high-yielding hybrid varieties. Over 65 ha of new, high-value

fruit crops were cultivated. Four villages had established their own livestock banks, avoiding high-cost credit. Nine new drinking water supply systems had benefited 550 households.

Comanagement of natural resources requires decentralization and changing senior government staff approaches. It has proven easier in China to introduce these mechanisms at the local level, where government staff are more accountable and closer to the people most affected. Slowly, however, change is coming at the level of the prefecture and the province. And lately there have even been signs of recognition of the benefits of CBNRM at the national level. Officials from the Ministry of Science and Technology in Beijing have visited the project site to evaluate the work of the GAAS research team.

A final note: about that biogas plant — following negotiations with team members, who were supported by township officials, the county finally relented on the "three pig rule" and allowed some flexibility. Villagers who could not afford three pigs could collect cattle manure instead. A less expensive, locally adapted gas plant was built and is working well.

This case study was written by Bob Stanley, an Ottawa-based writer.

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For more information

Dr Sun Qiu
Integrated Rural Development Centre
Guizhou Academy of Agricultural Sciences
Guiyang, Guizhou 550006
People's Republic of China

PHONE: +86-851-376-1734

EMAIL: QIU_SUN@YAHOO.COM



Rural Poverty and Environment Program
International Development Research Centre
PO Box 8500, Ottawa, ON
Canada K1G 3H9

PHONE: +1-613-236-6163

FAX: +1-613-567-7749

EMAIL: rpe@idrc.ca

WEB: www.idrc.ca/rpe

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